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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application Number: 10/655,904
Filing Date: September 05, 2003
Appellant(s): PARSONS, JAMES D.

RICHARD S. KOPPEL
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 01/09/2006 appealing from the Office action mailed 12/01/2005.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

5,025,243.	**ICHIKAWA**	**6-1991**

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1-5, 7-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ichikawa (U. S. Patent 5,025,243).

Ichikawa discloses an electromagnetic radiation detection system and method (Fig.1A) comprising a body F of SiC (see Col.1, lines 49-50) at least 200 micrometer thick (see Col.1, line 64) and a detector (including electrodes A) arranged to detect infrared radiation absorption by the SiC body F (see Col.3, lines 43-64) and to detect changes in the resistance of the SiC body F in response to the body receiving radiation having a wavelength less than about 10 micrometers (see Col.3, lines 48-49). Ichikawa fails to specifically disclose that the radiation has a wavelength of less than 10 micrometers, however it would have been obvious to one having ordinary skill in the art at the time the invention was made to recognize that infrared radiation of the type

irradiated to the body F in the system of Ichikawa is fairly described as radiation having a wavelength less than about 10 micrometers since the range covers the wavelength ranges described as "near" and "intermediate" infrared. Also, it would have been obvious to one of ordinary skill in the art at the time the invention was made that the detector in the system disclosed by Ichikawa was arranged to detect physico-chemical processes inside the body F which serve to explain the response of the body F to radiation. Ichikawa fails to specifically disclose that the thickness of the SiC body is at least 400 micrometers, and that it is in the range of between 400-2000 micrometers (claims 3, 11, 16), however using a thicker body would have been obvious to one having ordinary skill in the art since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art (*In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980)), and discovering the optimum or workable ranges involves only routine skill in the art (*In re Aller*, 220 F.2d 454, 105 USPQ 233, 235 (CCPA 1955)) especially given that a higher thickness for the SiC body does not improve the absorption but merely changes its size. Additionally, since Ichikawa does not disclose that the thickness of the body F changes throughout or that its surface roughness changes, it is assumed that the body F has uniform thickness and a flat surface.

Regarding claims 7, 8, 18 Ichikawa does not disclose any protrusions and/or surface irregularities in the SiC body and therefore, it is considered to be flat (no protrusions) and having a uniform thickness (uniform thickness and flatness of surface is present even if the filament is cylindrical).

Regarding claims 2, 10, 15, 20 Ichikawa discloses that the detector system detects infrared radiation absorption by the SiC body F (see Col.1, lines 54-58).

Regarding claims 4, 12, 17, 21 Ichikawa discloses that the detector system detects increases in the resistance of the SiC body F in response to the radiation because increases are a part of the changes described in Col.1, lines 54-58.

Regarding claims 5, 13 Ichikawa places no limitation on the infrared radiation which irradiates the SiC body F and therefore it would have been obvious to one having ordinary skill in the art to retain the features described at Col.1, lines 14-18 and implement the system for a broad band of wavelengths or a narrow band of wavelengths creating the arrangement of a filter. A filter to limit reception of specific radiation is a routine approach in this field.

(10) Response to Argument

The argument that the reference does not disclose the claimed less than 10 micrometer wavelength is not persuasive because, as clearly stated in the rejection, the reference discloses a SiC body that is responsive to "infrared" radiation, which is a spectrum that inherently includes the "near" and the "intermediate" IR range and thus it includes the 0.7-8 micrometer range. Thus, the SiC is responsive to wavelengths that are above but also to wavelengths that are in the range that is below the claimed 10 micrometers range. The argument that the reference is not irradiated with light of wavelength less than 10 micrometers is not persuasive since the claims (claims 9, 14, 19) do not claim "only" radiation that is less than 10 micrometers and thus any radiation that includes a

range that is less than 10 micrometers overcomes this limitation. The argument that the reference does not disclose the claimed 400 micrometers thick SiC body is not persuasive, because the reference does include a thickness of 200 micrometers, which is enough to create acoustic absorption in the body. If this is not so then the present application which discloses a range of "at least 200 micrometers" would not be enabled to create acoustic absorption in the SiC body either (see page 3, lines 8-10 of the specification). The argument that the reference does not include a thickness of the SiC body that is uniform because the thickness of a circular body as disclosed by the reference inherently cannot be uniform, is not persuasive because the diameter of a circular body is in fact the same throughout the body, and as such the thickness across the diameter axis remains the same. Thus, the thickness of the body is uniform. The argument that the radiation receiving surface of the SiC body as disclosed by the reference is not flat because "lack of protrusions and/or surface irregularities" does not mean "flat" is not persuasive because as clearly disclosed in the dictionary definition of the word "flat" (the Applicant relies on this definition), the meaning of the word encompasses "having a surface that is without marks, projections, or depressions" (definition number 3) or "without unevenness of surface" (definition number 1). Thus, "flat" in fact can be taken to mean a surface that "lacks protrusions and/or surface irregularities". The argument that the reference does not disclose acoustic absorption because acoustic absorption is only observed when the wavelength of the radiation that irradiates the SiC body is less than 10 micrometers is not persuasive because the reference allows for the irradiation of the SiC body with infrared radiation that is below

10 micrometers, and as such, when radiation of less than 10 micrometers hits the SiC body acoustic absorption inherently ensues. The argument that there is no acoustic absorption present in the reference SiC body because the body is only at maximum 200 micrometers thick and that such absorption occurs only if the body is at least 400 micrometers thick is not persuasive because the disclosure of the present invention clearly states that acoustic absorption occurs at 200 micrometer thickness. As such, since the reference allows for a 200 micrometers thickness and an irradiation with a radiation that is less than 10 micrometers, acoustic absorption occurs.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

OTILIA GABOR
PRIMARY EXAMINER

Otilia Gabor

Conferees:

Dave Porta

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